

REMARKS/ARGUMENTS

Claims 1-35 are pending in this application. Claims 2, 5, 7, 8, 12-14 and 18-35 have been withdrawn from consideration. Claims 1, 3, 4, 6, and 15-17 stand rejected. Claims 9-11 have been objected to but would allowable if placed in independent form. By this amendment, claim 11 has been placed in independent form and is submitted to be in condition for allowance.

Turning to the rejection of the claims, claims 1, 3, 4 and 6 stand rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 4,258,885 to Legeza in view of U.S. Patent Application 2003/0192955 to Geskin et al. The Examiner further rejects claims 15-17 under 35 U.S.C. §103 as being unpatentable over Legeza in view of Geskin et al. and further in view of U.S. Patent Application Publication 2004/0155125 to Kramer et al.

Applicants first note that the nozzle according to the present invention is directed to producing a high pressure fluid jet. In order to provide a fluid jet having a desired shape, for example, the rectangular shape shown in Fig. 1, the nozzle is made of a plurality of parts which are separated by a spacer seal. The parts are made of a deformable material to define the geometry of the nozzle outlet and provide sealing surfaces between the parts and the spacer seal and between the parts and the housing. Thus, the parts, for example, the elements 2 as shown in Fig. 1, are made of a deformable material so that when they are wedged in to the housing 1, a seal is maintained between the parts 2 and the housing 1.

This is important because at the extremely high pressures at which the present device operates, deformation of the parts so that a seal is created with the housing is, according to the invention, essential. Without this seal, the nozzle will not function. Instead it will leak and thus be ineffective.

The Legeza patent cited by the Examiner describes a low pressure device. It describes the nozzle tip of a spray gun, for example, for spraying paint. Thus, the aim of the Legeza device is to provide a uniform and precise spray pattern. In order to prevent wear of the parts, Legeza makes his parts of hard wear-resistant material such as ceramics or powdered metals. See Abstract, first four lines. For example, the parts 202, 204 shown in Fig. 5 and which are received in the housing shown in Fig. 4 are made of a hard wear-resistant material such as sintered tungsten, carbide steel or a sintered ceramic. See column 8, lines 33-35. Legeza requires these materials to be made of hard non-deformable materials so that they provide long wear resistance. However, Legeza is not concerned with sealing the parts 202, 204 to the housing because the device is utilized at relatively low pressures and a forward member 166 is formed from a resilient material to provide sealing. See column 8, lines 15-20. Thus, the elements 202 and 204 do not need to provide a sealing surface to the housing and thus are not made of a deformable material..

In contrast, in the present invention, the housing or the parts or the spacer seals are deformable so as to define the geometry of the nozzle outlet and seal surfaces between the parts and the spacer seal and between the parts and the housing.

In order to further define the invention and to define how the sealing is obtained, claim 1 has been amended to recite that the parts and the spacer seal are configured so that a force needed for inserting the assembly into the housing exceeds a force needed for a deformation of at least one of the housing and the assembly.

There is no teaching or suggestion in Legeza of the device as claimed wherein sealing surfaces between the parts and the housing are created and wherein the parts and the spacer seal are configured so that a force needed for inserting the assembly into the housing exceeds a force

needed for deformation of the housing and the assembly. Thus, a sealing surface is created between the parts and the housing by providing a force on the parts when inserted into the housing such that the force exceeds the force needed for deformation of either the housing or the parts of the assembly, or both, thereby creating the seal. There is no teaching or suggestion in the Legeza reference of the invention as now claimed.

The Examiner states that Legeza includes two “deformable” parts 202 and 204 because they are wedged within the nozzle tip holder. However, Applicants point out that this is not so. It does not follow that merely because the parts are wedged in the nozzle tip holder that the parts 202 and 204 are deformable. Further, as pointed out, Legeza forms these parts of a hard material such as ceramic or powdered metal. These materials are not deformable by definition. If an attempt was made to deform such parts, because of their brittle nature, they would crack and thus could not form the required sealing surfaces.

The Examiner further points to the Geskin reference for the teaching of a spacer seal. However, Geskin et al. does not teach or suggest the invention even when combined with Legeza because there is no teaching or suggestion in Geskin of forming a nozzle which includes an assembly that includes at least two deformable conjugated parts separated by a spacer seal and wherein the assembly is arranged in a housing sealed to the housing so as to form a nozzle outlet. As such, Geskin fails to teach or suggest anything related to forming a seal between deformable parts and a housing so as to provide a nozzle wherein sealing surfaces are created between the parts and the housing.

Accordingly, it is submitted that the combination of Legeza and Geskin fails to teach or suggest the present invention. The Kramer reference cited with respect to claims 15-17 adds nothing to the teachings of Legeza or Geskin which would teach or suggest the present invention.

Due to the election/restriction requirement, claims 2, 5, 7, 8 12-14 and 18-22 have been withdrawn from consideration. Applicants submit that the amended claim 1 in this application is generic and therefore submits that claims 2, 5, 7, 8 and 12-14 and 18-22 should be rejoined in this application if claim 1 is allowed, without prejudice to Applicants' right to file a divisional application directed to any non-joined claims and the remaining withdrawn claims 23-35 in this application.

In view of the above, Applicant submits that all claims in this application are now in condition for allowance, prompt notification of which is requested.

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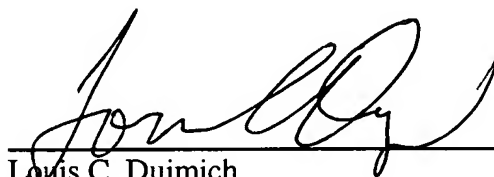
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March 14, 2006

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